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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,685	07/23/2003	Hendon Jerone Whitworth	Whitwo.H-01	1053

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Patent Law & Venture Group
Suite K-105
3151 Airway Ave.
Costa Mesa, CA 92626

EXAMINER

GILLAN, RYAN P

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,685

Applicant(s)

WHITWORTH ET AL.

Examiner

Ryan P. Gillan

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipate by Gordon et al. (4,599,049). Gordon et al. teach a fluid metering apparatus comprising: a pair of cylindrical housings (40) where each of the housings provides a fluid exchange port (clearly seen in figure 1), a screw (34 & 42) aligned longitudinally with the housing. A means for rotating (18 & 20), engaged with the screw for rotating the screw alternately in clockwise and counter-clockwise senses. A rod (12 and 14) having, at one end thereof, a nut (36 and 34), engaged proximally with the screw. The screw penetrating into a hollow space within the rod (clearly seen in figure 1). The rod linearly translating along the screw in response to rotation thereof and the port positioned at a distal end of the rod (col. 2 lines 36-44). Translation of the rod toward and away from the port draws fluid into and expels fluid out of the housing respectively (col. 2 lines 28-44).

3. The means for rotating enables the screws of the housings to be rotated in opposing directions such that the fluid is expelled from one of the housings while the other of the housing draws the fluid in, in an alternating, push-pull arrangement (col. 2 lines 36-44). A fluid conduction means which includes a double-throw fluid switch (22), the switch enabled for directing the fluid to one of the housings and directing fluid from

the other of the housings in a first position of the fluid switch and enabled for directing the fluid to the other of the housings and directing fluid from the one of the housings in a second position of the fluid switch (col. 2 lines 45-51). The fluid conduction means enabling the mixing of fluids (col. 3 lines 31-36) from at least two of the cylindrical housings and the fluid metering rates of the pair of cylindrical housings can be varied (col.2 lines 14-16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (4,599,049). Gordon et al teaches the limitations of claim 1, but fail to teach plural pairs of cylindrical housings.

6. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gordon et al. by adding additional pairs of cylindrical housings. Duplicating parts has no patentable significance unless a new and unexpected result is produced.

7. The fluid metering method as stated in claims 5-7, simply provides and engages the apparatus disclosed above and it would have been obvious to one of ordinary skill in the art at the time of the invention given to utilize such a method given said apparatus.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Nichols et al. (4,089,624) teach a pumping system dispensing a controlled and variable amount of fluid in predetermined quantities utilizing a reciprocating piston.
- Smith (5,098,386) teaches a pump with a coaxially reciprocating screw member, which includes a piston mounted at a forward distal end.
- Snodgrass et al. (5,516,429) teach hydraulic fluids pumped by cylinder/piston/stepper assemblies independently actuating diaphragm pumps.

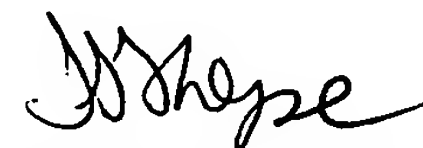
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:00 am - 4:30 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RPG



Timothy S. Thorpe
Supervisory Patent Examiner
Group 3700